

## TYPES OF FRUITS

Botanists define a fruit as a matured ovary. Many different types of fruits have evolved among the flowering plants. Figure 32-11 shows examples of some of these fruit types. Fertilization usually initiates the development of fruits. Fruits protect seeds, aid in their dispersal, and often delay their sprouting. Fruits are classified mainly on the basis of how many pistils or flowers form the fruit and whether it is dry or fleshy. Table 32-1 presents a classification system for fruits. Notice that fruits with common names that include "nut" or "berry" may not be nuts or berries. You may have heard the fleshy seeds of ginkgo, juniper, and yew referred to as berries. These names are misleading because ginkgo, juniper, and yew are gymnosperms, which do not form fruits.



**FIGURE 32-11**  
A pea pod is a simple fruit. A raspberry is an aggregate fruit. A pineapple is a multiple fruit.

**TABLE 32-1 Fruit Classification**

Major categories and types of fruits	Examples
<b>I. Simple fruit</b> —formed from one pistil of a single flower	
<b>A. Dry at maturity</b>	
1. Usually splits open	
a. <b>Legume</b> —splits along two sides to form two halves	pea, peanut, black locust
b. <b>Follicle</b> —splits along one side	milkweed, columbine
c. <b>Capsule</b> —splits in a variety of other ways	poppy, tulip
2. Usually does not split open	
a. <b>Grain</b> —thin ovary wall fused to seed coat	corn, wheat
b. <b>Nut</b> —thick, woody ovary wall not fused to single seed	oak, chestnut
c. <b>Achene</b> —thin ovary wall not fused to single seed	sunflower, dandelion
d. <b>Samara</b> —like an achene but with a thin, flat wing	ash, elm, maple
<b>B. Fleshy at maturity and usually not opening</b>	
1. Usually contains only one seed	
a. <b>Drupe</b> —stony inner layer around the seed	cherry, coconut, pecan
2. Usually contains many seeds	
a. <b>Pome</b> —core with seeds surrounded by papery ovary walls; outer part formed from sepals	apple, pear
b. <b>Typical berry</b> —thin skin	grape, tomato, banana
c. <b>Pepo</b> —berry with a thick, hard rind	watermelon, cucumber
d. <b>Hesperidium</b> —berry with leathery, easily removed skin	orange, grapefruit, lemon
<b>II. Aggregate fruit</b> —formed from several pistils of a single flower	
<b>A. Dry at maturity</b>	tulip tree, magnolia
<b>B. Fleshy at maturity</b>	raspberry, strawberry
<b>III. Multiple fruit</b> —formed from several flowers growing together	
<b>A. Dry at maturity</b>	sweetgum, sycamore
<b>B. Fleshy at maturity</b>	pineapple, fig

### Eco Connection

#### Reforestation Efforts

The process of replacing trees that have died or been cut down is called reforestation. Natural reforestation occurs when seeds grow into new seedlings. Throughout the world, many governments and private landowners do not replace trees after land has been cleared to produce timber, build roads, and construct buildings.

Deforestation is occurring at a rate of several hundred thousand square miles per year. Although this rate seems overwhelming and daunting, people can help reforestation efforts by planting seeds or seedlings in their own community. Trees can be planted in yards, in pots on patios or balconies, and along streets. It's best to choose native trees because they usually do not require fertilizers, pesticides, or much watering.

Many neighborhoods and local organizations sponsor tree-planting programs. Besides providing beautification, these programs can help educate people about the importance of trees. For more information, call your local or state parks department, the U.S. Forest Service, a county extension agent, or a nearby college forestry department.